

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A method for altering fiber length development ~~or~~ ~~properties~~ of a cotton ~~fiber-producing~~ plant comprising the step of providing cells of a cotton plant with a chimeric gene comprising the following operably linked DNA fragments:

a plant expressible promoter;

the coding region from a plant sucrose synthase gene; and,

a transcription termination and polyadenylation signal which functions in said plant cells.

Claim 2. (Previously Presented) The method according to claim 1, wherein said coding region from a plant sucrose synthase gene is translated into an active plant sucrose synthase protein.

Claim 3. (Previously Presented) The method according to claim 1, wherein said coding region from a plant sucrose synthase gene comprises a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 2.

Claim 4. (Withdrawn) The method according to claim 1, wherein said coding region from a plant sucrose synthase gene reduces the expression of an endogenous sucrose synthase gene.

Claim 5. (Withdrawn) The method according to claim 4, wherein said coding region comprises a nucleotide sequence selected from the group consisting of a nucleotide sequence comprising at least 19 or 25 contiguous nucleotides having at least 70% sequence identity to a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or the complement thereof; and a nucleotide sequence comprising at least 25 contiguous nucleotides having at least 70% sequence identity to a nucleotide sequence encoding a polypeptide comprising the nucleotide sequence of SEQ ID NO: 1 or the complement thereof.

Claim 6. (Withdrawn) The method according to claim 5, wherein said coding region comprises the nucleotide sequence of SEQ ID NO: 1 from the nucleotide at position 2208 to the nucleotide at position 2598 or the complement thereof.

Claim 7. (Withdrawn) The method according to claim 5, wherein said coding region comprises both sense and antisense nucleotide sequences capable of forming a double stranded RNA molecule.

Claim 8. (Previously Presented) The method according to any one of claims 1, 2, or 3, wherein said promoter is a subterranean clover stunt virus promoter.

Claims 9-11. (Canceled).

Claim 12. (Currently Amended) A method for improving fiber yield in a ~~fiber-~~
~~producing~~ cotton plant, comprising providing cells of said plant with a chimeric gene
comprising the following operably linked DNA fragments

a plant expressible promoter;

the coding region from a sucrose synthase gene; and

a transcription termination and polyadenylation signal which functions in said plant
cells.

Claim 13. (Currently Amended) A method for improving fiber quality in a ~~fiber-~~
~~producing~~ cotton plant, comprising providing cells of said plant with a chimeric gene
comprising the following operably linked DNA fragments

a plant expressible promoter;

the coding region from a sucrose synthase gene; and

a transcription termination and polyadenylation signal which functions in said plant
cells.

Claim 14. (Currently Amended) A method for increasing seed size in a ~~fiber-~~
~~producing~~ cotton plant, comprising providing cells of said plant with a chimeric gene
comprising the following operably linked DNA fragments:

a seed-specific promoter;

the coding region from a sucrose synthase gene; and

a transcription termination and polyadenylation signal which functions in said plant
cells.

Claim 15. (Currently Amended) A ~~fiber-producing~~ cotton plant comprising in its genome a chimeric DNA comprising the following operably linked DNA fragments:

a plant expressible promoter;

the coding region from a sucrose synthase gene; and,

a transcription termination and polyadenylation signal which functions in said plant;

said cotton plant having altered fiber length development or improved fiber quality or increased seed size, compared to cotton plants which do not have said chimeric DNA.

Claim 16. (Currently Amended) A ~~fiber-producing~~ cotton plant according to claim 15, wherein said coding region from a plant sucrose synthase gene is translated into an active plant sucrose synthase protein.

Claim 17. (Currently Amended) The ~~fiber-producing~~ cotton plant according to claim 15, wherein said sucrose synthase gene comprises a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 2.

Claim 18. (Withdrawn; Currently Amended) A ~~fiber-producing~~ cotton plant according to claim 15, wherein said RNA is capable of reducing an endogenous sucrose synthase gene and said fiber cells have a reduced sucrose activity compared to fiber cells of plant cells which do not comprise said chimeric DNA.

Claim 19. (Withdrawn; Currently Amended) The ~~fiber-producing~~ cotton plant according to claim 18, wherein said coding region comprises a nucleotide sequence selected from the group consisting of

a nucleotide sequence comprising at least 19 or 25 contiguous nucleotides having at least 70% sequence identity to a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or the complement thereof; and

a nucleotide sequence comprising at least 19 or 25 contiguous nucleotides having at least 70% sequence identity to a nucleotide sequence encoding a polypeptide comprising the nucleotide sequence of SEQ ID NO: 1 or the complement thereof.

Claim 20. (Withdrawn; Currently Amended) The ~~fiber-producing~~ cotton plant according to claim 18, wherein said coding region comprises the nucleotide sequence of SEQ ID NO: 1 from the nucleotide at position 2208 to the nucleotide at position 2598 or the complement thereof.

Claim 21. (Canceled).

Claim 22. (Currently Amended) Seeds of a cotton plant according to any one of claims 15, 16, or 17, said seed comprising said chimeric DNA.

Claim 23. (Canceled).

Claim 24. (Currently Amended) Fibers with altered development or properties, isolated from cotton plants according to any one of claims 15, 16, or 17.

Claim 25. (Canceled).

Claim 26. (Currently Amended) Cotton plants ~~Plants~~ obtained through the methods of any one of claims 1, 2, or 3.

Claim 27. (Currently Amended) Cotton plants ~~Plants~~ obtained through the methods of claim 8.

Claims 28-29. (Canceled).

Claim 30. (Currently Amended) Cotton plants ~~Plants~~ obtained through the methods of any one of claims 12, 13, or 14.